

RELATIONSHIP OF PRESEASON MOVEMENT SCREENS WITH OVERUSE SYMPTOMS IN COLLEGIATE BASEBALL PLAYERS

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ABSTRACT

Background: The shoulder mobility screen of the Functional Movement Screen™ (FMS™) and the upper extremity patterns of the Selective Functional Movement Assessment (SFMA) assess global, multi-joint movement capabilities in the upper-extremities. Identifying which assessment can most accurately determine if baseball players are at an increased risk of experiencing overuse symptoms in the shoulder or elbow throughout a competitive season may reduce throwing-related injuries requiring medical attention.

Purpose: The purpose of this study was to determine if preseason FMS™ or SFMA scores were related to overuse severity scores in the shoulder or elbow during the preseason and competitive season.

Study design: Cohort study.

Methods: Sixty healthy, male, Division III collegiate baseball players (mean age = 20.1 ± 2.0 years) underwent preseason testing using the FMS™ shoulder mobility screen, and SFMA upper extremity patterns. Their scores were dichotomized into good and bad movement scores, and were compared to weekly questionnaires registering overuse symptoms and pain severity in the shoulder or elbow during the season.

Results: Poor FMS™ performance was associated with an increased likelihood of experiencing at least one overuse symptom during the preseason independent of grade and position (adjusted odds ratio [OR] = 5.14, p = 0.03). Poor SFMA performance was associated with an increased likelihood of experiencing at least one overuse symptom during the preseason (adjusted OR = 6.10, p = 0.03) and during the competitive season (adjusted OR = 17.07, p = 0.03) independent of grade and position.

Conclusion: FMS™ shoulder mobility and SFMA upper extremity pattern performance were related to the likelihood of experiencing overuse symptoms during a baseball season. Participants with poor FMSTM performances may be more likely to experience at least one overuse symptom in their shoulder or elbow during the preseason. Additionally, individuals with poor SFMA performances may be more likely to report overuse symptoms during the preseason or competitive season.

Level of evidence: Level 3

Key words: Functional Movement Screen™, movement dysfunctions, movement system, prevention, risk factors, sports injury.

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